

We claim:

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1. A computing system for managing annotations, the computing system comprising:
- 5 a tier III server to store data for the annotations;
- a tier II server to maintain an index of the data for the annotations stored on the tier III server; and
- a tier I server to determine if a content source has data indexed by the tier II server.

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2. The computing system of claim 1, wherein the tier II server further stores a plurality of generic properties for the annotations.

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3. <sup>computing</sup> The computerized system of claim 1, wherein the tier III server further stores one or more type specific properties for the annotations.

4. The computing system of claim 1, wherein the tier I server comprises a plurality of servers.

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5. The computing system of claim 1, wherein the tier II server comprises a plurality of servers.

6. The computing system of claim 1, wherein the tier III server comprises a plurality of servers.

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7. <sup>computing</sup> The computerized system of claim 1, wherein the tier III server further stores client software to allow a user to view a type of annotation.

8. The computing system of claim 1, wherein the content source is identified by a document identifier.

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9. The computing system of claim 8, wherein the document identifier is selected from the group consisting of: a directory path, a uniform resource locator, and a file name.

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10. A computerized method of posting an annotation, the method comprising:  
sending an annotation post from a client to a tier III server;  
storing a portion of the annotation on the tier III server;  
sending a second portion of the annotation from the tier III server to a tier II server;  
10 storing the second portion of the annotation on the tier II server;  
sending association information from the tier II server to a tier I server; and  
storing the association information on the tier I server.

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15 11. The computerized method of claim 10, wherein the acts are performed in the order listed.

12. The computerized method of claim 10, further comprising notifying the client of a successful post to the tier III server.

20 13. The computerized method of claim 12, wherein notifying the client occurs prior to sending the second portion of the annotation to the tier II server.

14. The computerized method of claim 12, further comprising notifying the tier III server of a successful post to the tier II server.

25 15. The computerized method of claim 14, further comprising notifying the tier II server of a successful post to the tier I server.

30 16. The computerized method of claim 15, wherein sending the annotation post from the client to the tier III server comprises sending a URL for the tier I server, a URL for the tier II server, a URL for the tier III server, a context document

identifier, type specific annotation properties, generic annotation properties, and an annotation body.

17. The computerized method of claim 16, wherein storing a portion of the  
5 annotation on the tier III server comprises storing the annotation body and the type specific annotation properties.

18. The computerized method of claim 17, further comprising generating a  
unique identifier for the annotation body and type specific annotation properties  
10 stored on the tier III server.

19. The computerized method of claim 18, wherein sending a second portion of  
the annotation to the tier II server comprises sending a URL for the tier I server, a  
URL for the tier II server, a URL for the tier III server, a context document  
15 identifier, generic annotation properties, and the unique identifier.

20. The computerized method of claim 19, wherein storing the second portion of  
the annotation on the tier II server comprises storing the generic annotation  
properties, the URL for the tier III server, and the unique identifier.  
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21. The computerized <sup>method</sup>~~system~~ of claim 20, wherein sending association  
information to the tier I server comprises sending the tier I server URL, the tier II  
server URL, the context document identifier and an indexing identifier.

22. A computer-readable medium having stored thereon a "client-to-tier III  
server" data structure comprising:

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- a first field containing data representing a context document identifier;
  - a second field containing data representing a body of the annotation;
  - a third field containing data representing generic properties of the  
30 annotation;

a fourth field containing data representing type specific properties of the annotation;

a fifth field containing data representing a URL for a tier III server for receiving and storing a portion of the post of the annotation;

5 a sixth field containing data representing a URL for a tier II server for receiving and storing a portion of the post of the annotation; and

a seventh field containing data representing a URL for a tier I server for receiving and storing associations for the annotation.

10 23. A computer-readable medium having stored thereon a "tier III server-to-tier II server" data structure comprising:

a first field containing data representing a context document identifier;

a second field containing data representing generic properties of the annotation;

15 a third field containing data representing a URL for a tier III server for receiving and storing a portion of the post of the annotation;

a fourth field containing data representing an identifier for the portion of the post of the annotation stored on the tier III server;

a fifth field containing data representing a URL for a tier II server for receiving and storing a portion of the post of the annotation; and

20 a sixth field containing data representing a URL for a tier I server for receiving and storing associations for the annotation..

24. A computer-readable medium having stored thereon a "tier II server-to-tier I" server data structure comprising:

25 a first field containing data representing a context document identifier;

a second field containing data representing an indexing identifier of the annotation;

30 a third field containing data representing a URL for a tier II server for indexing the annotation; and

a fourth field containing data representing a URL for a tier I server for receiving and storing associations for the annotation.

25. A computerized method for managing annotations, the method comprising:  
5 storing within a tier I server a plurality of associations with references to a tier II server for each association;

storing within a tier II server an indexing identifier for each one of the annotations and storing within the tier II server a reference to a tier III server for each one of the annotations;

10 storing within a tier III server content for each one of the annotations;  
receiving by the tier I server from a client a context document identifier; and  
providing a first response to the client from the tier I server, wherein the first response comprises one or more associations for the context document identifier and the reference to the tier II server for each one of the associations.

15 26. The method of claim 25, further comprising:  
receiving by the tier II server from the client a selection identifying one of the associations for the context document identifier;  
providing a second response to the client from the tier II server, wherein the  
20 second response comprises a header for each one of the annotations associated with the context document identifier and the reference to the tier III server for each one of the annotations.

27. The method of claim 26, further comprising:  
25 receiving by the tier III server from the client an annotation identifier; and  
providing a third response to the client from the tier III server, wherein the third response comprises a body for the annotation identified by the annotation identifier.

28. The computerized method of claim 27, wherein the context document identifier is selected from the group consisting of: a uniform resource locator, a file name, and a directory path.

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